

CLAIMS

What is claimed is:

1. A method for processing basic input output system (BIOS) modules of a computer having a central processing unit (CPU), a computer bus, and a critical nonvolatile storage device, comprising the steps of:

- 5 storing a predetermined small amount of BIOS initialization code in a first portion of the critical nonvolatile storage device that is operative to initialize the CPU and the system memory;
- storing a dispatch manager in a second portion of the critical nonvolatile storage device that is operative to selectively load and iteratively execute a predetermined number of tasks relating to complete initialization of the computer;
- 10 turning on the computer;
- executing the minimal initialization code to initialize the CPU and the system memory;
- copying the dispatch manager from the critical nonvolatile storage device to the system memory; and
- 15 executing the dispatch manager to execute the predetermined number of tasks to initialize the computer.

2. The method recited in Claim 1 wherein the computer further comprises one or more secondary nonvolatile storage devices and wherein the method further comprises the steps of:

- 5 storing a plurality of BIOS modules in a protected area of the secondary nonvolatile storage device that are operative to control operation of the computer; and
- executing the dispatch manager to sequentially copy selected BIOS modules from the protected area of the one or more secondary nonvolatile storage devices to the system memory, and execute the selected BIOS modules in the system memory.

3. The method recited in Claim 1 wherein the step of executing the dispatch manager comprises the steps of:

- determining which BIOS modules are required for operation of the computer;
- determining if a required BIOS module is stored in the system memory;
- 5 executing the BIOS module if the required BIOS module is in memory;

copying the required BIOS module from the secondary nonvolatile storage device to the system memory if the required BIOS module is not in memory, and executing the copied BIOS module; and

10 repeating the previous three steps until all required BIOS modules are copied and executed.

4. The method recited in Claim 2 wherein the step of executing the dispatch manager comprises the steps of:

determining which BIOS modules are required for operation of the computer;

5 determining if a required BIOS module is stored on the secondary nonvolatile storage device;

copying the required BIOS module from the secondary nonvolatile storage device to the system memory;

executing the copied BIOS module; and

10 repeating the previous three steps until all required BIOS modules are copied from the secondary nonvolatile storage device to the system memory and executed.

5. The method recited in Claim 2 wherein the secondary nonvolatile storage device comprises a hard disk drive.

6. The method recited in Claim 2 wherein the hard disk drive comprises a vendor protected area, a user area, and a protected BIOS module area.

7. The method recited in Claim 2 wherein the protected BIOS module area comprises a formatted area created using Protected Area Run-Time Interface Extensions Services (PARTIES) technology.

8. The method recited in Claim 2 wherein the secondary nonvolatile storage device comprises a compact disk ROM.

9. The method recited in Claim 2 wherein the secondary nonvolatile storage device comprises a flash memory.

10. The method recited in Claim 2 wherein the secondary nonvolatile storage device comprises a floppy disk drive.

11. The method recited in Claim 2 wherein the secondary nonvolatile storage device comprises a Zip drive.

12. The method recited in Claim 2 wherein the secondary nonvolatile storage device comprises a SuperDisk drive.

13. The method recited in Claim 1 further comprising the step of launching an operating system of the computer after all required BIOS modules are copied to the system memory and executed.

14. A method for processing basic input output system (BIOS) modules of a computer having a central processing unit (CPU), a computer bus, a critical nonvolatile storage device, and secondary nonvolatile storage device, comprising the steps of:

- 5 storing a predetermined small amount of BIOS initialization code in a first portion of the critical nonvolatile storage device that is operative to initialize the CPU and the system memory;
- storing a dispatch manager in a second portion of the critical nonvolatile storage device that is operative to selectively load and iteratively execute a predetermined number of tasks relating to complete initialization of the computer;
- 10 storing a predetermined number of BIOS modules on the secondary nonvolatile storage device that are operative to control operation of the computer;
- turning on the computer;
- executing the minimal initialization code to initialize the CPU and the system memory;
- 15 copying the dispatch manager from the critical nonvolatile storage device to the system memory;
- executing the dispatch manager to execute the predetermined number of tasks to completely initialize the computer, which predetermined number of tasks include sequentially copying selected BIOS modules from the protected area of the secondary nonvolatile storage device to the system memory and sequentially executing the copies
- 20 BIOS modules to initialize the computer.

15. The method recited in Claim 14 wherein the step of executing the dispatch manager comprises the steps of:

- determining which BIOS modules are required for operation of the computer;
- determining if a required BIOS module is stored in the system memory;
- 5 executing the BIOS module if the required BIOS module is in memory;

copying the required BIOS module from the secondary nonvolatile storage device to the system memory if the required BIOS module is not in memory, and executing the copied BIOS module; and

10 repeating the previous three steps until all required BIOS modules are copied and executed.

16. The method recited in Claim 14 wherein the secondary nonvolatile storage device is selected from the group including a hard disk drive, a compact disk ROM, a flash memory, a floppy disk drive, a Zip drive, and a SuperDisk drive.

17. The method recited in Claim 14 further comprising the step of launching an operating system of the computer after all required BIOS modules are copied to the system memory and executed.